

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Parts 2 and 97 of the)	ET Docket No. 02-98
Commission's Rules to Create a Low Frequency)	RM-9404
allocation for the Amateur Radio Service)	
)	
Amendment of Parts 2 and 97 of the)	
Commission's Rules Regarding an Allocation of a)	RM-10209
Band near 5 MHz for the Amateur Radio Service)	
)	
Amendment of Parts 2 and 97 of the)	
Commission's Rules Concerning the Use)	RM-9949
Of the 2400-2402 MHz Band by the)	
Amateur and Amateur-Satellite Services)	

To: The Commission

COMMENTS OF THE HOMEPLUG POWERLINE ALLIANCE

The HomePlug Alliance submits these comments in response to the Commission's Notice of Proposed Rulemaking proposing to allocate a new band of frequencies to the amateur radio service at, *inter alia*, 5250-5400 kHz ("Notice").¹ HomePlug Alliance does not oppose the allocation of this new band to the nation's radio amateurs, but requests that home consumer equipment meeting Part 15 standards be permitted to continue to be sold and used in the United

¹ Notice of Proposed Rulemaking, FCC 02-136, released May 15, 2002; 67 Fed. Reg. 40898 (publ. June 14, 2002).

States free from Amateur Radio user complaint for a period of ten years after re-allocation of this spectrum to the Amateur Radio Service.

INTRODUCTION

The HomePlug Powerline Alliance is an industry organization with a membership of over 65 leading companies.² These companies support networking devices that communicate through a home's electric power wires, allowing each power outlet to double as a network outlet as well. The resulting network is used to transmit data at up to 14 mbps between outlets. The presence of data on the electrical wiring has no effect on the electric service in the home.

Agreement on the HomePlug standard ensures that devices manufactured by one company will be fully interoperable with those of all other companies. Home networking products include bridging and routing devices, network interface cards, and combination 802.11b access point/powerline devices. In the future, the convenience and low cost of connecting devices through power outlets will enable connection of many new and existing products, including entertainment, information access and telephone services, televisions, set top boxes, printers, PCs, MP-3 and CD players; and many other devices – all without the necessity to install costly new or special wiring.

BACKGROUND

HomePlug-certified products are unintentional radiators authorized pursuant to Part 15 of the Commissions Rules because a small amount of radiation escapes the wiring. The amount of radiation is small, and is regulated by the Commission pursuant to Section 15.209. HomePlug

² Member companies are listed at: <http://www.homeplug.org/members/index.html>

members conducted field trials at some 500 homes in 12 U.S. States and 2 Canadian Provinces. The testing confirmed theoretical coverage and network performance while the devices operated within the Commission's conducted and radiated emission limits.³

ANY NEW ALLOCATION SHOULD NOT AFFECT HOMEPLUG COMPLIANT DEVICES

HomePlug devices represent a potentially huge new market for the consumer electronics and PC industries. Pursuant to Part 15 of the commission's rules, HomePlug products operate over the powerlines in the 4-21 MHz spectrum range. As unlicensed devices, HomePlug products must not interfere with licensed users and must accept any interference from licensed users. Products already are in the marketplace, and more are on drawing boards in the last stages of design.

In the design stage of the HomePlug standard, in order to promote co-existence between HomePlug equipment and sensitive Amateur Radio receiving systems, HomePlug took the extra measure of notching out all current amateur radio bands between 4 and 21 MHz in order to minimize radiation in those bands. Working with the American Radio Relay League (ARRL), we were successful in demonstrating that the interference potential from our products is minimal because the unintentional radiation remains at a very low level.

We are concerned, however, about the implications of a completely new amateur radio band at 5 MHz. We intend to continue to work with the radio amateurs to optimize our designs

³ Section 15.109(e) provides that the radiated emissions requirements of Section 15.209(a) apply to HomePlug devices. This section limits radiated emissions in the 1.705-30 MHz band to under 30 uV/m at 30 meters. Tests were conducted consistent with the requirements of Section 15.31. Each device was tested at 3 typical sites (houses) at specific distances along each of 16 equally-spaced radials around the house.

to mitigate any potential for interference. However, as a practical matter, the addition of a new band potentially has implications for our existing products in the marketplace and for the design of future products.

We therefore respectfully request that if the 5 MHz spectrum is allocated for an additional amateur band as proposed, that the Commission provide that amateurs operate subject to any interference caused by carrier current devices such as ours that are in compliance with the limits specified at Section 15.209 of its rules, 47 C.F.R. § 15.209, without recourse to harmful interference complaint resolution for a period of ten years from the date the spectrum is re-allocated to the Amateur Radio Service. We do NOT ask for our devices to be protected from interference CAUSED by radio amateurs, only that our devices be presumed to not cause interference and that they not be subjected to mandatory cessation if interference is alleged.

Our request is based upon the need for the Commission to take into account the existing widespread deployment of HomePlug-compliant devices in consumer hands and products already in final design stages and ready to be released.

As a practical matter, all amateur operations are frequency agile. Amateurs tune across their bands, and can select frequencies on which to operate anywhere with the Commission-specified limits. Therefore each amateur has the ability to select frequencies to minimize any received low-level signal. Additionally, amateur use of the band will undergo a ramp-up period measured in years from the time of actual allocation. Amateur equipment itself will have to be re-designed and marketed, and new antennas suitable for the new band will have to be designed and installed. Experience with the last new amateur allocations below 30 MHz, in the early

1980's (at 10, 18, and 24 MHz), indicates that amateur use will gradually increase over a period of 5-10 years as new equipment and antennas are designed and purchased.

Allowing the continued unhampered use of HomePlug devices during this transition period will prevent unnecessary disruption in the marketplace and needless disruption to consumers. It also will provide time needed to investigate methods to minimize or eliminate the potential for interference within this proposed band; and to work with the amateurs themselves to determine whether a problem will exist, the nature of any such problem if it does exist, and practical solution(s) therefor.

CONCLUSION

In a number of instances the Commission has recognized the important opportunities that unlicensed devices operating pursuant to Part 15 offer for new services and technologies.⁴ HomePlug devices offer an exciting new way to seamlessly connect proliferating home digital devices without the added expense of installing new wires in walls and floors. We ask only that

⁴ See, e.g., Second Report and Order, GEN Docket No. 90-314, 8 FCC Rcd 7700, 7738 at para. 87 (1993) (with regard to an allocation for unlicensed PCS devices).

our need be recognized for a transition period for study and resolution of any interference potential if, and when, a new allocation is made. Doing so will prevent unnecessary disruption to our industry and ensure the most efficient use of the natural spectrum resource.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D.R. Siddall", written over a horizontal line.

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